



PTO/SB/08a (10-07)

Approved for use through 10/31/2007. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary) Sheet 1 of 5			Complete if Known	
			Application Number	10/522,948
			Filing Date	November 3, 2005
			First Named Inventor	Jie Hong Di
			Art Unit	1616
			Examiner Name	Courtney A. Brown
			Attorney Docket Number	101547.55778US

U.S. PATENT DOCUMENTS						
Examiner Initials ¹	Cite No. ¹	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)				
		US-				
		US-				

FOREIGN PATENT DOCUMENTS							
Examiner Initials ¹	Cite No. ¹	Foreign Patent Document		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³	Number ⁴ Kind Code ⁵ (if known)				

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials ¹	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	C1	Reports of Cookson and Conaforth of Lincoln University made to Summit Quinphos (NZ) Limited.	
	C2	CAM de Klein and R.S.P. van Logtestijn - Denitrification and N2O emission from urine-affected grassland soil. Plant and Soil 163: 235-242, 1994.	
	C3	S.F. Ledgard, R.M. Monaghan and C.A.M. de Klein - Fast-Tracking Research on Nitrogen Model Development	
	C4	H.J. Di, K.C. Cameron, S. Moore and N.P. Smith - Nitrate leaching from dairy shed effluent and ammonium fertilizer applied to a free-draining pasture soil under spray or flood irrigation. NZ J. Ag. R 41:263-270, 1998.	
	C5	G.L. Velthof, O. Oenemo, R. Postma and M.L. van Beusichem - Effects of w e and amount of applied nitrogen fertilizer on nitrous oxide fluxes from intensively managed grassland. Nutrient Cycling In Agroecosystems 46: 257-267, 1997.	

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)		Complete if Known			
		Application Number	10/522,948		
		Filing Date	November 3, 2005		
		First Named Inventor	Jie Hong Di		
		Art Unit	1616		
		Examiner Name	Courtney A. Brown		
Sheet	2	of	5	Attorney Docket Number	101547.55778US

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	C6	Cookson and Comforth - Dicyandiamide slows nitrification in dairy cattle urine patches: effects on soil solution composition, soil pH and pasture yield. <i>Soil Biology & Biochemistry</i> 34 (2002) 1461-1465.	
	C7	H j . Di and K.C. Cameron - The use of a nitrification inhibitor, dicyandiamide (DCD), to decrease nitrate leaching and nitrous oxide emissions in a simulated grazed and irrigated grassland. <i>Soil Use and Management</i> (2002) 18, 395-403.	
	C8	Williamson et al "Reducing nitrogen leaching from dairy farm effluent - irrigated pasture using dicyandiamide: a lysimeter study" - <i>Agriculture, Ecosystems and Environment</i> 69 (1998) 81-88.	
	C9	Williamson and Jarvis - Effect of Dicyandiamide on Nitrous Oxide Flux following Return of Animal Excreta to Grassland - <i>Soil Biol. Biochem.</i> Vol. 29. No. 9/10. pp. 1575-1578, 1997.	
	C10	Anne Lee - Lincoln trials into leaching of nitrogen - <i>Dairy Exporter</i>	
	C11	Anne Lee - Lysimeter trial goes underground - <i>Dairy Exporter</i>	
	C12	Sumitomo Chemical Co. Ltd - New Zealand Patent No.161791 - New Fertilizer Composition	
	C13	Rao and Popham - Urea placement and nitrification inhibitor effects on growth and nitrogen accumulation by no-fill winter wheat. <i>Crop Science, Vo.39, Issue 4, pp. 1115-1119, received at Grasslands</i>	
	C14	F.E. Below and L.E. Gentry - Nitrogen Source Influences Nutrient Uptake. <i>Better Crops, Spring 1988</i>	
	C15	S.F. Ledgard, C.A.M. de Klein, J.R. Crush and B.S. Thorrold - Dairy farming, nitrogen losses and nitrate-sensitive areas. <i>Proceedings of the New Zealand Society of Animal Production</i> 60: 256-260	

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)		Complete if Known			
		Application Number	10/522,948		
		Filing Date	November 3, 2005		
		First Named Inventor	Jie Hong DI		
		Art Unit	1616		
Examiner Name	Courtney A. Brown				
Sheet	3	of	5	Attorney Docket Number	101547.55778US

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	C16	R.A. Carran, P Roger Ball, P.W. Theobald and M.E.G. Collins - Soil nitrogen balances in urine-affected areas under two moisture regimes in Southland. <i>New Zealand Journal of Experimental Agriculture</i> , 1982, Vol. 10: 377-381	
	C17	Andrea Pearson, Crop & Food Research – Winter Nitrate Leaching from Maize and Sweetcorn Paddocks	
	C18	S.F. Ledgard - Nitrogen Losses from NZ Dairy Farms	
	C19	Kim Stevenson, Petrochem - Acidification of Soils following Fertiliser Application	
	C20	M.P. Germann-Bauer and A. Amberger - Degradation of the nitrification inhibitor 1-amidino-2-thiourea in soils, and its action in Nitrosomonas pure culture and soil incubation experiments. <i>Fertilizer Research</i> 19: 13-19, 1989	
	C21	G.S. Rajendram, S.F. Ledgard, R. Monaghan, J.W. Penno, M.S. Sprosen and L. Ouyang - Effect of Rate of Nitrogen Fertiliser on Cation and Anion Leaching under Intensively Grazed Dairy Pasture.	
	C22	Article for N Factor - Effect of Nitrogen Fertiliser on Leaching of Nutrients	
	C23	Is it worth adding a nitrogen stabilizer? – <i>Arable Farming</i> , February 1986	
	C24	R.J. Goos and B.E. Johnson - Effect of ammonium thiosulfate and dicyandiamide on residual ammonium in fertilizer bands. <i>Commun. In Soil Sci. Plant Anal.</i> , 23 (9-10), 1105-1117 (1992)	
	C25	H. Santruckova and M. Simek - Effect of soil CO2 concentration on microbial biomass. <i>Bil Fertil Soils</i> (1997) 25: 269-273	

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)		Complete if Known			
		Application Number	10/522,948		
		Filing Date	November 3, 2005		
		First Named Inventor	Jie Hong DI		
		Art Unit	1616		
Examiner Name	Courtney A. Brown				
Sheet	4	of	5	Attorney Docket Number	101547.55778US

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	C26	I.P. McTaggart, H. Clayton, J. Parker, L. Swan and K.A. Smith - Nitrous oxide emissions from grassland and spring barley, following N fertilizer application with and without nitrification inhibitors. <i>Biol Fertil Soils</i> (1997) 25: 261-268	
	C27	P.A. Joseph and R. Prasad - The effect of dicyandimide and neem cake on the nitrification of urea-derived ammonium under field conditions. <i>Blot Fertil Soils</i> (1993) 15: 149-152	
	C28	J.J. Schroder, L. ten Holte, H. van Keulen and J.H.A.M. Steenvoorden - Effects of nitrification inhibitors and time and rate of slurry and fertilizer N application on silage maize yield and losses to the environment. <i>Fertilizer Research</i> 34: 267-277, 1993	
	C29	D.R. Timmons - Nitrate Leaching as Influenced by Water Application Level and Nitrification Inhibitors. <i>J. Environ. Qual.</i> , Vol.13, No.2, 1984	
	C30	A. Amberger - Research on Dicyandiamide as a Nitrification Inhibitor and Future Outlook. <i>Commun. In Soil Sci. Plant Anal.</i> , 20 (19&20), 1933-1955 (1989).	
	C31	M.A. Turner and A.N. MacGregor - An evaluation of 'Terazole' as a nitrifide for improving the efficiency of use of nitrogenous fertilizers on pasture. <i>NZ Journal of Agricultural Research</i> 21 (1978): 39-45	
	C32	S.N. Sharma and R. Kumar - Effects of dicyandiamide (DCD) blended with urea on growth, yield and nutrient uptake of wheat. <i>Journal of Agricultural Science. Cambridge</i> (1998), 131. 389-394	
	C33	A.R. Mosier, J.M. Duxbury, JR. Freney, O. Heinemeyer and K. Minami - Nitrous oxide emissions from agricultural fields: Assessment, measurement and mitigation. <i>Plant and Soil</i> 181: 95-108, 1996	
	C34	R. Merino, J.M. Estavillo, G. Besga, M. Pinto and C. Conzalez-murua - Nitrification and denitrification derived N ₂ O production from a grassland soil under application of DCD and Actilith F2. <i>Nutrient Cycling in Agroecosystems</i> 60: 9-14, 2001	
	C35	D.M. Davies and P.K.J. Williams - The Effect of the Nitrification Inhibitor Dicyandiamide on Nitrate Leaching and Ammonia Volatilization: A U.K. Nitrate Sensitive Areas Perspective. <i>Journal of Environmental Management</i> (1995) 45, 264-272	

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)		Complete if Known			
		Application Number	10/522,948		
		Filing Date	November 3, 2005		
		First Named Inventor	Jie Hong Di		
		Art Unit	1616		
Examiner Name	Courtney A. Brown				
Sheet	5	of	5	Attorney Docket Number	101547.55778US

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	C36	M.K. Abbasi and W.A. Adams -Estimation of simultaneous nitrification and denitrification in grassland soil associated with urea-N using 15N and nitrification inhibitor. <i>Bio Fertil Soils</i> (2000) 31: 38-44	
	C37	New Zealand Patent Specification No.511606 - Summit-Quinphos (NZ) Limited - Fertiliser Compositions, published at IPONZ on 22 November 2002	
	C38	DIDIN - Nitrogen Inhibitor - article NZ Agrichemical Manual 1998/99 on Soil Additives and Conditioners	
	C39	First Amended Notice of Opposition to Grant of Patent (Section 21), Patent Act 1953 (three (3) pages)	
	C40	Ravensdown Fertiliser Co-Operative Ltd. & Lincoln University (applicants) -vs- Balance Agri-nutrients Ltd. (opponent), Pleading, Evidence and Prior Art Index (four (4) pages)	

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.